UTILITY PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James F. STEVENSON
Serial No.: 10/783,555
Filed: February 20, 2004

Group Art Unit: 2837
Examiner: J.A. Luks
Confirmation No.: 7448

For: NOISE SUPPRESSION STRUCTURE AND METHOD OF MAKING THE SAME

Docket No.: H0006422
Customer No.: 000128

DECLARATION UNDER 37 C.F.R. §1.131

I, James F. Stevenson declare as follows:

1. I am a co-inventor of the subject matter claimed in the above-identified application (Patent Application Serial No. 10/783,555), which was filed on February 20, 2004, and which is assigned to Honeywell International, Inc.

2. I and my co-inventor (Jeff Mendoza) conceived the subject matter claimed of at least independent Claim 1 of the above-identified application prior to October 31, 2003, the earliest effective filing date of U.S. Patent Application Publication No. 2005/0126848 (Siavoshai et al.). Attached hereto as Exhibit A is a copy of an invention disclosure that evinces conception of the claimed invention. Although the dates are redacted in the attached invention disclosure, I declare herein that it was prepared prior to October 31, 2003.

3. I and my co-inventor actually reduced to practice the subject matter claimed of at least the element of independent Claim 1 of the above-identified application that is being rejected in view of U.S. Patent Application Publication No. 2005/0126848 (Siavoshai et al.), prior to October 31, 2003, which is the earliest effective filing date of Siavoshai et al.

4. As evidence of actual reduction to practice I have attached hereto as Exhibit B a simplified representation of a test setup that was used to run flow tests on foam bulk absorber samples manufactured before October 31, 2003. The test setup measures the flow rate of air (ft^3/hr) for a given pressure drop (in. of H_2O) to determine flow resistivity (which correlates with density and also with acoustic performance) near both ends of foam bulk absorber samples. A higher flow rate for given pressure drop indicates the density at that end is lower than the other end, and vice-versa. Concomitantly, if the flow rates are different for the two ends of the sample, then a density gradient can be inferred to exist between the two ends. To confirm this density-flow relationship for the data shown, the specimen used for the flow measurements was divided into approximately equal parts and the densities were measured by dividing the measured mass by the measured volume. The density at the high flow end as measured to be 0.156 g/cc and at the low flow end was measured to be 0.197 g/cc, an increase of 26%. The density diffeence for the control samples was about 2%.

5. I have also included, in Exhibit C, data from two test runs conducted on a foam bulk absorber sample (one is a repeat run), and a test run conducted on a control sample having no density gradient. The difference in flow rates shown in these test data clearly indicate variations in density between the ends of the foam bulk absorber samples, whereas the data for the control sample indicate no significant difference in density. It is noted that the repeat run indicates different flow rates but about the same ratio of flow rates.

6. The evidence in Exhibits B and C and the density data clearly show actual reduction to practice of a foam bulk absorber comprising a thermoset material and having a density gradient between the first side and second side, wherein the density of the bulk foam absorber at the first side is greater than the density of the bulk foam absorber at the second side, as recited in independent Claim 1 of the above identified application.

7. I do not declare that the evidence included in Exhibits B and C were run on integrated noise suppression acoustic panels in which the foam bulk absorber samples were disposed between a back plate and a face plate. Rather, only that the bulk foam absorber samples comprise a thermoset material having a density gradient between the first side and second side, and that the density of the bulk foam absorber samples at the first side were greater than the density of the bulk foam absorber samples at the second side.

8. I hereby declare that all statements made herein of our own knowledge are true, and that all statements made on information and belief are believed to be true; we further decelare that all statements made herein are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent which issues thereon.

James F. Stevenson

James F. Stevenson

6-29-07

Date